

Claims 1, 2, 4-8, 10-14, 16-20 and 22-24 stand rejected under 35 U.S.C. §103 as allegedly being obvious over Mitsutake '538 in view of Kato '708, Dynka '825, Banno (JP '731)<sup>1</sup> and Roovers '785. In addition, Claims 9 and 21 were rejected as allegedly being obvious over those patents and further in view of Wallace '563. These rejections are respectfully traversed.

Applicants' invention as set forth in Claim 1 relates to a method for manufacturing an airtight vessel, and includes the steps of fabricating an airtight vessel connected to an evacuation tube, evacuating the inside of the airtight vessel through the evacuation tube while simultaneously baking the entire airtight vessel, and activating a getter disposed in the airtight vessel. As will be appreciated, Claim 1 includes the step of after initiating the evacuation step, in a condition where the getter is activated, continuing the evacuation step and sealing the evacuation tube by heating the evacuation tube.

Claim 13 is directed to a method for manufacturing an image-forming apparatus using an airtight vessel containing a plurality of electron emitting devices and image-forming members. Claim 13 includes the same steps as in Claim 1.

In accordance with Applicants' claimed invention, gasses discharged from the evacuation tube, as the getter is being activated, will not be absorbed into the vessel. The result is an airtight vessel having a prolonged life and providing superior performance.

As discussed previously, the primary citation to Mitsutake relates to an electron beam apparatus and an image forming apparatus that includes an airtight envelope. An exhaust pipe of the envelope is connected to a vacuum pump and used to evacuate the envelope.

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<sup>1/</sup> Although Banno was included in the rejection this reference is not discussed in the body of the rejection.

The Office Action takes the position that Mitsutake teaches activating a getter immediately before the sealing the exhaust tube or, in the alternative, activating a getter immediately after sealing the exhaust tube.

The secondary citations to Kato and Dynka are relied upon in the Office Action to show that it would have been obvious to activate the getter before sealing the exhaust tube.

The Roovers patent relates to a method of sealing a vacuum vessel having a thick-walled exhaust tube, and was cited to show that it is routine to heat the exhaust tube to seal it and continue the baking and pumping until the exhaust tube has been sealed. In Roovers, the thick-walled exhaust tube 2 extends from a vacuum vessel 1 and is in communication at its lower end 3 with a vacuum pump. Heating coils 8 and 9 heat the exhaust tube until it collapses to seal one end.

Roovers does not teach or suggest activating a getter. It is respectfully submitted, therefore, that only through hindsight would one skilled in the art have combined the teachings of Mitsutake and Roovers in the manner proposed in the Office Action. In Roovers, the thick-walled exhaust tube is sealed in a way to prevent cracking, and in doing so exhausts gas set free from the thick-walled exhaust tube into a vacuum pump. Roovers has nothing to do with activating a getter or evacuating and sealing in consideration with the activated getter

Accordingly, reconsideration and withdrawal of the rejection of Claims 1, 2, 4-8, 10-14, 16-20 and 22-24 under 35 U.S.C. §103 is respectfully requested.

The tertiary citation to Wallace relates to a method of making a field emission device and was cited for its teaching of providing means for reactivating a non-evaporable getter.

Wallace fails, however, to compensate for the deficiencies in the citations discussed above with respect to Applicants' independent claims. Therefore, reconsideration and

withdrawal of the rejection of Claims 9 and 21 under 35 U.S.C. §103 is also respectfully requested.

Claims 25 and 26 are also submitted to be patentable.

Claim 25 relates to a method for manufacturing an airtight vessel, and includes the steps of fabricating an airtight vessel connected to an evacuation tube, evacuating the inside of the airtight vessel through the evacuation tube, and activating a non-evaporable getter disposed in the airtight vessel before baking the airtight vessel. Additional steps include baking the entire airtight vessel and sealing the evacuation tube, and after baking the entire airtight vessel, reactivating the non-evaporable getter. Claim 25 is supported, among other places, in Figure 12 and in the specification beginning on page 32, line 4.

Claim 26 relates to a method for manufacturing an airtight vessel, and includes the steps of fabricating and evacuating the airtight vessel as in Claim 25. This method also includes the steps of baking the entire airtight vessel, degassing an evaporable getter during the baking step, activating a non-evaporable getter after the degassing step and during the baking step, sealing the evacuation tube during the baking step, and after the baking step, activating the evaporable getter. Support for Claim 26 can be found, for example, in Figure 18 and in the specification beginning on page 45, line 17.

Accordingly, it is submitted that Applicants' invention as set forth in independent Claims 1, 13, 25 and 26 is patentable over the cited art. In addition, dependent Claims 2, 4-12, 14 and 16-24 set forth additional features of Applicants' invention. Independent consideration of the dependent claims is respectfully requested.

Applicants' undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should continue to be directed to our below-listed address.

Respectfully submitted,

  
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